

**REMARKS**

In view of the above amendments and following remarks, reconsideration of the outstanding office action is respectfully requested.

The objection to the specification is respectfully traversed in view of the above amendments.

The objection to the claims is respectfully traversed in view of the above amendments.

The rejection of claims 4-5, 17 and 28 under 35 U.S.C. § 112(second paragraph) for indefiniteness is respectfully traversed in view of the above amendments.

The rejection of claims 1-9, 17, 28 and 30 under 35 U.S.C. § 112(first paragraph) for lack of written description is respectfully traversed in view of the above amendments.

Claim 1 recites a substantially pure human or rabbit 3-phosphoinositide-dependent protein kinase that phosphorylates and activates protein kinase B $\alpha$  at a rate substantially the same as the rate wild-type PDK1 activates protein kinase B $\alpha$ , wherein the protein kinase comprises amino acids 83 to 342 and 450-550 of SEQ ID NO:1.

Support for claim 1 can be found at page 67, lines 3-5 and page 67, line 30 to page 68, line 22, which discusses the catalytic and PH domains of the protein kinase. Further, the specification as filed contains a discussion of the importance of the PH domain in the 3-phosphoinositide-dependent protein kinase in the activation of PKB $\alpha$  (see, for example, page 7, line 25 to page 8, line 18; page 71, line 23 to page 72, line 18; page 74, line 29 to page 75, line 11, and the example beginning at page 64 of the specification).

Further, the above cited portions of the specification fulfill the requirements for the written description requirement. In particular, the specification, as filed, conveys to one skilled in the art that the inventors had

possession of an invention relating to a 3-phosphoinositide-dependent protein kinase which activates protein kinase B $\alpha$  at a rate substantially the same as the rate wild-type PDK1 activates protein kinase B $\alpha$ . Further, the protein kinase comprises amino acids 83 to 342 and 450-550 of SEQ ID NO:1. The specification demonstrates the particular functional relationship of proteins having the same structure, i.e. comprising amino acids 83 to 342 and 450-550 of SEQ ID NO:1.

Accordingly, the rejection of claims 1-9, 17, 28 and 30 under 35 U.S.C. § 112(first paragraph) for lack of written description is improper and should be withdrawn.

The rejection of claims 1-9, 17, 28 and 30 under 35 U.S.C. § 112(first paragraph) for lack of enablement is respectfully traversed.

As described above, the specification as filed includes a description of a 3-phosphoinositide-dependent protein kinase which activates protein kinase B $\alpha$  at a rate substantially the same as the rate wild-type PDK1 activates protein kinase B $\alpha$  and includes amino acids 83 to 342 and 450-550 of SEQ ID NO:1.

Further, the examples include a discussion of protein kinases which did not include the PH domain and the resultant reduced rate of activation of PKB $\alpha$ .

The rejection of claims 1-9, 17, 28 and 30 under 35 U.S.C. § 112(first paragraph) for lack of enablement is improper and should be withdrawn.

The rejection of claims 1-2, 4-9, 17, 28, and 30 under 35 U.S.C. §102(a) as anticipated by Alessi et al., Current Biology 7(4):261-269(1997) is traversed in view of the above amendments. Alessi does not disclose or suggest a 3-phosphoinositide-dependent protein kinase which activates protein kinase B $\alpha$  at a rate substantially the same as the rate wild-type PDK1 activates protein kinase B $\alpha$  and includes amino acids 83 to 342 and 450-550 of SEQ ID NO:1.

The rejection of claim 17 under 35 U.S.C. §102(b) as anticipated by Dietrich (PIR Accession Number S69657)(1996) is respectfully traversed in view of the above amendment. Dietrich does not disclose or suggest 3-phosphoinositide-dependent protein kinase which activates protein kinase B $\alpha$  at a rate substantially the same as the rate wild-type PDK1 activates protein kinase B $\alpha$  and includes amino acids 83 to 342 and 450-550 of SEQ ID NO:1.

The rejection of claims 1-9, 17, 28 and 30-32 for obviousness-type double patenting over claims 1-2, 4 and 14 of U.S. Patent No. 6,734,001 is noted. A terminal disclaimer is submitted herewith. The Commissioner is hereby authorized to charge any fee which is due to Deposit Account 50-0772.

Respectfully submitted,

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Date

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